

WHAT IS CLAIMED IS:

1. A machine, comprising:
a motor comprising a stator carrying one or more concentrated windings wound on teeth, and a rotor capable of rotating about the stator, said rotor comprising a tubular casing and permanent magnets; and
a pulley coupled to the rotor and partially overlying the stator.
2. A machine according to claim 1, wherein said one or more concentrated windings have heads, and the pulley overlies said heads.
3. A machine according to claim 1, wherein the tubular casing comprises a stack of superposed laminations.
4. A machine according to claim 3, wherein the stack of superposed laminations is maintained in compression by fasteners engaged in the pulley.
5. A machine according to claim 4, wherein the pulley comprises a peripheral portion having grooves formed therein to receive cables, and a portion for receiving the fasteners, said portion for receiving the fasteners being made integrally with the peripheral portion.
6. A machine according to claim 5, wherein said one or more concentrated windings have heads, and wherein the portion for receiving the fasteners covers the heads without covering the teeth of the stator.
7. A machine according to claim 1, wherein the pulley comprises passages enabling air to flow through the pulley.
8. A machine according to claim 1, wherein the rotor has a free axial end remote from the pulley, and comprising a strip covering said free axial end.
9. A machine according to claim 1, wherein the rotor has a shaft, and said machine has only two bearings supporting axial ends of said shaft.
10. A machine according to claim 1, wherein the machine comprises at least one parking brake.
11. A machine according to claim 10, wherein said parking brake comprises jaws.
12. A machine according to claim 11, wherein the pulley comprises a remote end from the stator; wherein said remote end is connected to a ring for co-operating with said jaws of the parking brake.
13. A machine according to claim 1, wherein the machine is supported by at least one support at each end of the machine.
14. An elevator system comprising a machine according to claim 1.

15. An elevator system according to claim 14, wherein the system further comprises at least one support for said machine at each end of said machine.
16. A method for driving an elevator, comprising driving a cable of said elevator with a machine according to claim 1.